A New Genus and Species of Buccinidae from the Fiji Islands

(Mollusca: Gastropoda)

BY

WALTER O. CERNOHORSKY

Vatukoula, Fiji Islands

(Plate 20; 3 Text figures)

Recent collecting in the Fiji Islands has brought to light living specimens of a buccinid species, which after comparison with related forms already known appears to be new to science. Study of the soft parts of this new species leads to the necessity of erecting a new genus which, according to our present knowledge, appears to be confined to the Pacific region.

GASTROPODA

Prosobranchia

Buccinidae

Sukunaia Cernohorsky, gen. nov.

Type species: *Sukunaia jenningsi* Cernohorsky spec. nov.

Description: Shell spindleform, somewhat inflated, teleoconch of six convex and swollen whorls, protoconch of 1½ smooth nuclear whorls. Body whorl smooth, penultimate whorl obsoletely striate, antepenultimate whorl spirally corded, earlier whorls clathrate; sutures distinct but moderately shallow, body suture oriented obliquely to axis. Aperture wide, oval, edge of outer lip obsoletely denticulate, labrum with weak plicae; columella concave, with a blunt denticle anteriorly of columella and another sharply sculptured denticle on parietal wall. Anterior canal short, wide and open.

Radula with small trapezoidal rhachidians, which are equipped with only a few obsolete, irregular and slender denticles which generally do not protrude past the top of the plate; in only one juvenile specimen did the central cusp slightly overlap the edge of the plate. Laterals with 3 strong cusps, base of plate with a prominent knob facing rhachidians.

Discussion: In general outline and characters, shells of the new genus resemble *Appisania* Thiele, 1929; however, shells of the latter genus have less convex whorls which are prominently spirally corded, and the protoconch has generally 2½ nuclear whorls. The denticles on the edge of the labial lip are prominent and sharp, plicae on labrum well developed. The radulae and opercula, however, are appreciably different.

Sukunaia jenningsi Cernohorsky, spec. nov.

Description: Shell small, spindleform, spire longer than aperture; dark purple in colour, ornamented with 15 tan-coloured spiral lines on body whorl and 7 such lines on the penultimate whorl; an obsolete central transverse zone is indicated on the body whorl by nebulous bluish-white, transversely oriented spots, which are distributed over 4 tan spiral lines; nebulous and almost obsolete bluish-white narrow axial flames are positioned within the 4 light coloured spiral lines. Teleoconch of 5 whorls (1 whorl and protoconch missing), whorls regularly convex and swollen, body whorl concave near suture which is placed obliquely to the axis of the shell; body whorl smooth, with only superficial spiral ridges near suture, and spiral cords towards the base, penultimate whorl obsoletely spirally striate, antepenultimate whorl spirally corded, earlier whorls clathrate; sutures distinct but shallow. Aperture wide and oval, interior light blue to violet in colour, edge of labial lip with 14 dark purple, blunt and somewhat obsolete denticles, labrum with 17 weak plicae which extend towards interior of aperture, ultimate anterior plica short and prominent; columella anteriorly bluish-white, sculptured with a blunt and somewhat triangular denticle, columellar wall purplish-brown, parietal wall purple and with a prominent bluish-white denticle. Anterior canal short, wide and open, aperture flaring anteriorly.

Range: One immature specimen was complete (Paratype 3), and the teleoconch consisted of 6 whorls of which the first 3 whorls were clathrate; the protoconch consists of 1½ smooth, glassy, lavender-coloured nuclear whorls, with the first one-half turn being dark purple. The white axial

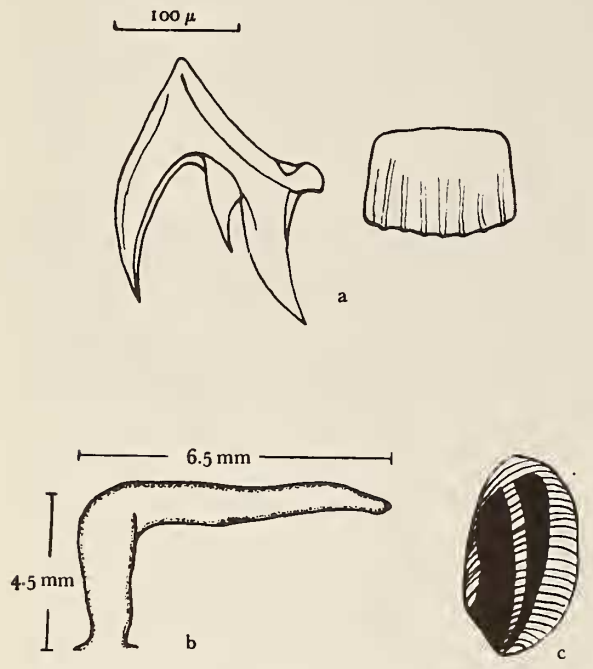

Figure 1

Sukunaia jenningsi Cernohorsky
a: Half-Row of Radula b: Penis
c: Operculum (immature specimen)

flames on the body whorl are prominent in some specimens and may also be visible on the penultimate whorl. The dark purplish denticles at the edge of the labial lip number 16 and 17 in Paratypes No. 1 and No. 2 respectively.

The operculum is elliptical, slightly pointed anteriorly and posteriorly, nucleus terminal but obsoletely defined. Operculum is light brown in colour, ornamented with 2 axially curved purplish-black zones, the one near the columellar margin the largest; only in one juvenile specimen (Paratype No. 3) did the 2 dark zones coalesce.

Periostracum although thin is moderately opaque in the dried state, and is yellowish-grey in colour.

Animal: Sole of foot creamy-white, dorsum of foot blackish-grey, ornamented with light-coloured encircling lines; siphon mottled with greyish-brown. Tentacles very short and stubby, rounded at distal end, eyes very small, black, and situated on the outer edge of the thickened base; proboscis light fawn coloured, long and slender, with a nipple-like protrusion at the distal end.

Radula: The radulae of the holotype and 4 paratypes were examined. The radular ribbon is translucent-white, but the last 20-odd fully formed rows of teeth are orange-brown, nascentes are white. Length of ribbons ranged from 11.5 mm to 15.3 mm, the width from 0.49 mm to 0.68 mm, in shells 19.7 mm to 23.2 mm in length. The ribbons contained 113 to 131 fully formed rows of teeth (+ 8 to 11 nascentes), and early rows of teeth displayed appreciable wear on cusps. Rhachidians are trapezoidal in outline, straight or very slightly convex at the base; cusps are almost obsolete, irregular and slender, and may vary in number in rhachidians of the same ribbon; the cusps generally do not protrude beyond the margin of the plate; however, in one ribbon examined the central cusp overlapped only slightly past the edge of the plate. Laterals larger than rhachidians, base of plate concave and with a prominent knob at end facing rhachidians; laterals are equipped with 3 massive curved cusps, of which the outer cusp is the longest, central cusp the smallest.

Explanation of Plate 20

Figure 1: *Sukunaia jenningsi* Cernohorsky. Holotype, Smithsonian Institution, U.S.N.M. No. 673301; 23.2 mm. Naevuevu, Viti Levu, Fiji (x 2.0)

Figure 2: *Sukunaia jenningsi* Cernohorsky. Paratype 1 (coll. A. Jennings); 23.1 mm. Nuevuevu, Viti Levu, Fiji (x 1.9)

Figure 3: *Sukunaia jenningsi* Cernohorsky. Paratype 3 (immature), British Museum (Natural History) No. 1966194; 19.7 mm. Naevuevu, Viti Levu, Fiji (x 2.5)

Figure 4: *Sukunaia jenningsi* Cernohorsky. Paratype 4 (immature), coll. Cernohorsky; 22.8 mm. Naevuevu, Viti Levu, Fiji (x 1.9)

Figure 5: *Appisania montrouzieri* (Crosse). Northwest Island, Queensland (x 2.4)

Figure 6: *Appisania montrouzieri* (Crosse). Viti Levu Bay, Viti Levu, Fiji (x 2.1)

Figure 7: *Appisania montrouzieri* (Crosse). Suva, Viti Levu, Fiji (x 1.9)

Figure 8: *Appisania montrouzieri* (Crosse). Hazlewood Island, Whitsunday Group, Queensland (x 2.3)

Figure 9: *Appisania fasciculata* (Reeve). Davao, Mindanao, Philippine Islands (beach specimen; *leg.* Arnalot), U.S.N.M. No. 231048 (x 1.75)

Figure 1 Figure 2 Figure 3 Figure 4

Figure 5 Figure 6 Figure 7

Figure 8 Figure 9